

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (currently amended) A reconfigurable pallet for an assembly line that supports a heavy-weight structure, comprising:

a pallet base;

at least one track formed in said pallet base;

a plurality of load-bearing modular stanchions that are supported on said pallet base and slidably engage said at least one track to selectively position said modular stanchions along x and y axes relative to a top surface of said pallet base, said modular stanchions each including a support element that has a height along a z axis that is transverse to said x and y axes, said support element supporting said heavy-weight structure ~~wherein said heavy-weight structure is selected from being configured to support an engine, a chassis, or a vehicle sub-assembly or a vehicle component on the assembly line wherein said stanchions are configured to support the structure during an assembly operation and further configured to support the structure during movement from a first assembly line station to a second assembly line station.~~

2. (original) The reconfigurable pallet of claim 1 wherein said x and y axes are parallel to a top surface of said pallet base and said z axis is perpendicular to said x and y axes.

3. (original) The reconfigurable pallet of claim 1 wherein said support element is movable along said z axis to adjust said height.
4. (original) The reconfigurable pallet of claim 3 wherein each of said modular stanchions further comprises a support cylinder that is selectively actuated to move said support element to a position along said z axis.
5. (original) The reconfigurable pallet of claim 4 further comprising a hydraulic pump in fluid communication with said support cylinder and operable to adjust a hydraulic pressure within said support cylinder to move said support element along said z axis.
6. (original) The reconfigurable pallet of claim 1 wherein each of said modular stanchions further comprises a stanchion base that supports said support element.
7. (original) The reconfigurable pallet of claim 6 wherein said pallet base further includes a screw-drive that engages said stanchion base wherein rotation of said screw-drive induces linear motion of said modular stanchion along said track.
8. (original) The reconfigurable pallet of claim 1 wherein said at least one track extends from a center point of said pallet base.

9. (original) The reconfigurable pallet of claim 8 wherein said pallet base further includes a rotatable member that is rotatable about said center point and that supports said at least one track.

10. (currently amended) A pallet for an assembly line that is configurable to support a first heavy-weight structure and reconfigurable to support a second heavy-weight structure, comprising:

a pallet base;

at least one track formed in said pallet base; and

a plurality of load-bearing modular stanchions that slidably engage said at least one track to selectively move along x and y axes relative to a top surface of said base, said modular stanchions each including a support element configured to support an heavy-weight structures selected from engines, chassis, or vehicle sub-assemblies or a vehicle component that have has a height defined along a z axis transverse to said x and y axes, said support element having a first position to support said first heavy-weight structure and having a second position to support said heavy-weight second structure wherein said modular stanchions are configured to support the structure during an assembly operation and further configured to support the structure during movement from a first assembly line station to a second assembly line station.

11. (original) The pallet of claim 10 wherein said support element is movable along said z axis to adjust said height.

12. (original) The pallet of claim 10 wherein each of said modular stanchions further comprises a support cylinder that is selectively actuated to move said support element to a position along said z axis.

13. (original) The pallet of claim 12 further comprising a hydraulic pump in fluid communication with said support cylinder and operable to adjust a hydraulic pressure within said support cylinder to move said support element along said z axis.

14. (original) The pallet of claim 10 wherein each of said modular stanchions further comprises a stanchion base that supports said support element.

15. (original) The pallet of claim 14 wherein said pallet base further includes a screw-drive that engages said stanchion base wherein rotation of said screw-drive induces linear motion of one of said modular stanchions.

16. (original) The pallet of claim 10 wherein said track extends from a center point of said pallet base and that engages said stanchion base for movement of said stanchion base across said x and y axes.

17. (original) The pallet of claim 16 wherein said pallet base further includes a rotatable member that is rotatable about said center point and that supports said track.

18. (currently amended) A reconfigurable pallet for an assembly line that is configurable to support multiple heavy-weight structures, comprising:

a pallet base;

at least one track formed in said pallet base; and

a load-bearing modular stanchion that comprises:

a stanchion base that is slidably supported on said at least one track and that is movable along x and y axes relative to a top surface of said pallet base; wherein said stanchion base is configured to support the structure during an assembly operation and further configured to support the structure during movement from a first assembly line station to a second assembly line station; and

a support element configured to support [[an]] heavy-weight structures selected from engines, chassis, or [[a]] vehicle sub-assemblies component that [[is]] are supported on said stanchion base and that has a height transverse to said x and y axes along a z axis, said support element having a first position to support a first heavy-weight structure and a second position to support a second heavy-weight structure.

19. (original) The reconfigurable pallet of claim 18 wherein said support element is movable along said z axis to adjust said height.

20. (original) The reconfigurable pallet of claim 19 wherein said modular stanchion further comprises a support cylinder that is selectively actuated to move said support element to a position along said z axis.

21. (original) The reconfigurable pallet of claim 20 further comprising a hydraulic pump in fluid communication with said support cylinder and operable to adjust a hydraulic pressure within said support cylinder to move said support element along said z axis.

22. (original) The reconfigurable pallet of claim 18 wherein said base further includes a screw-drive that engages said stanchion base wherein rotation of said screw-drive induces linear motion of said modular stanchion along said track.

23. (original) The reconfigurable pallet of claim 18 wherein said track extends from a center point of said pallet base and that engages said stanchion base for movement of said stanchion base across said x and y axes.

24. (original) The reconfigurable pallet of claim 23 wherein said pallet base further includes a rotatable member that is rotatable about said center point and that supports said track.

25. (currently amended) An assembly line for assembling a product, comprising:
a plurality of operation stages; and
a pallet that supports a base structure of said product and carries said base structure between said operating stages, comprising:
a pallet base;
at least one track formed in said pallet base;
a stanchion base that is supported on said pallet base and that is movable along x and y axes relative to a top surface of said pallet base; and
a load-bearing support element configured to support ~~an~~ heavy-weight structures selected from engines, chassis, or a vehicle sub-assemblies component that is are supported on said stanchion base and that ~~has~~ have a height transverse to said x and y axes along a z axis, said support element having a first position to support said base structure wherein said stanchion base is configured to support the structure during an assembly operation and further configured to support the structure during movement from a first assembly line station to a second assembly line station.

26. (original) The assembly line of claim 25 wherein said support element is movable along said z axis to adjust said height.

27. (original) The assembly line of claim 26 wherein said pallet further comprises a support cylinder that is supported by said stanchion base and that is selectively actuated to move said support element to a position along said z axis.

28. (original) The assembly line of claim 27 further comprising a hydraulic pump in fluid communication with said support cylinder and operable to adjust a hydraulic pressure within said support cylinder to move said support element along said z axis.

29. (original) The assembly line of claim 25 wherein said pallet base further includes a screw-drive that engages said stanchion base wherein rotation of said screw-drive induces linear motion of said modular stanchion along said track.

30. (original) The assembly line of claim 25 wherein said track extends from a center point of said pallet base and that engages said stanchion base for movement said stanchion base across said x and y axes.

31. (original) The assembly line of claim 30 wherein said pallet base further includes a rotatable member that is rotatable about said center point and that supports said track.